PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of the existing traffic control signal at the intersection of US1 (Belair Road) and MD 152 (Mountain Road) in Harford County, Maryland.
US1 is considered to run in a north/south direction.

Intersection modifications include widening of southbound US 1 and island relocations along north and southbound US1.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA eight (8) phase, full-traffic-actuated mode. There will be a exclusive lead left turn phase for the southbound movement and an exclusive lag left turn phase for the northbound movement of US 1. The US 1through movements will operate concurrently. There will be an exclusive/permissive left turn phase for both left turn movements of MD 152. The MD 152 through movements will operate concurrently.

Existing cabinet and controller to be utilized. The existing CCTV cameras is to be relocated..

CONTACT LIST

The contact persons for District •4 are as follows:

Ms. Erin Kuhn
Assistant District Engineer - Traffic
410-321-2781

Mr. Mike Pasquariello
Assistant District Engineer - Utility
410-321-3460

Mr. Andre Futrell
Assistant District Engineer - Maintenance
410-321-2761

Mr. Ed Rodenhizer
MD-SHA-Signal Shop
410-787-7652

Mr. Richard L. Doff
Chief, Traffic Operations Division
410-787-7630

EQUIPMENT LIST

Equipment to be furnished and installed by the Contractor.
All equipment in this list shall have catalog cuts submitted for approval prior to installation.

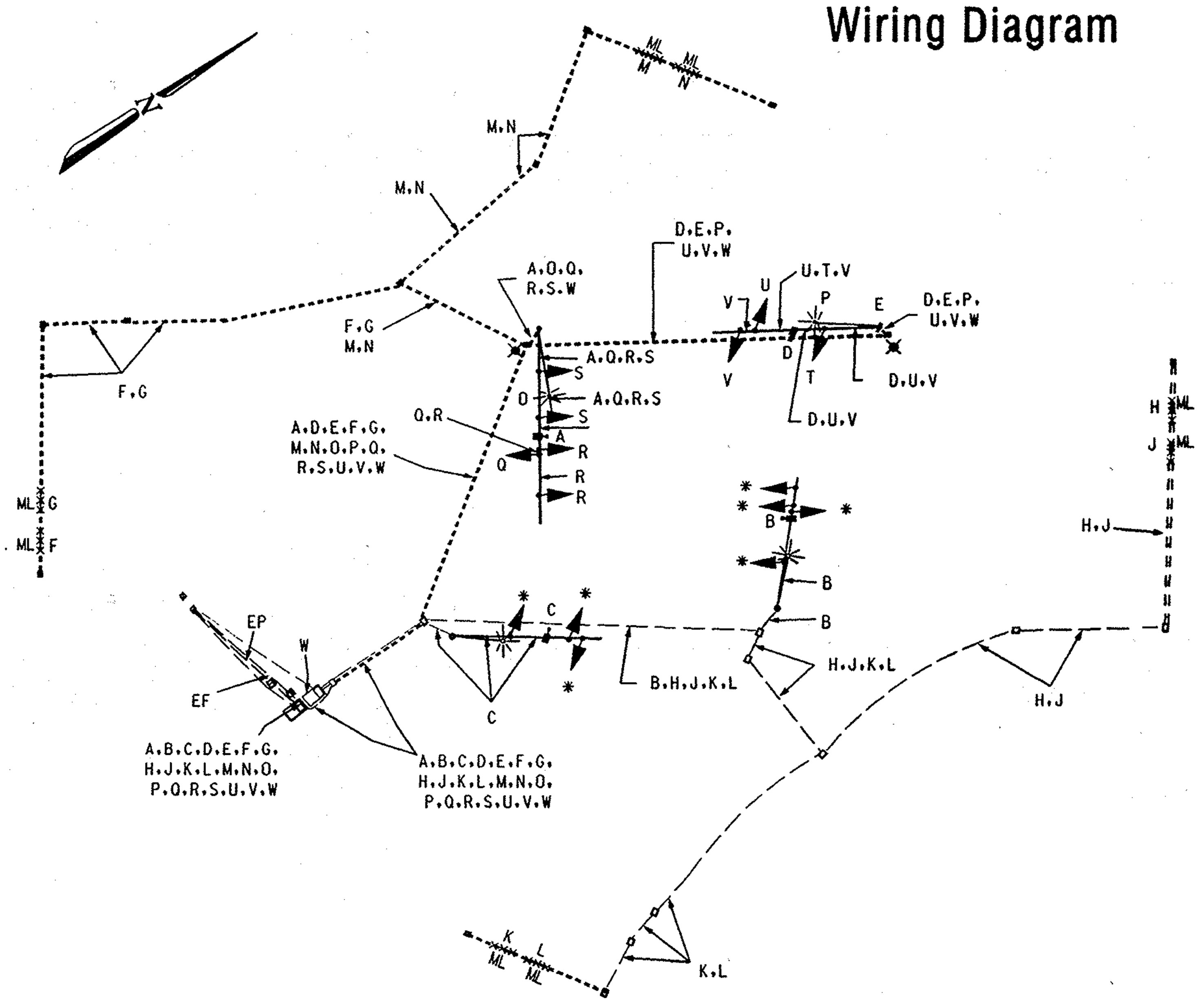
Quantity	Units	Description
1	EA	27 ft. steel mast arm pole with a 50 ft. mast arm.
1	EA	27 ft. steel mast arm pole with a 60 ft. mast arm.
1	EA	3 ft. pole extension.
2	EA	12 in/ 8 in, one -way, five section (12 in R,Y, G, 8 in,GA) (LED adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	12 in., one-way five section (R,Y, G, YA, GA) (LED) adjustable traffic signal head with mast arm mounting hardware and tunnel visors.
5	EA	12 in., one-way, three section (RA,YA,GA) (LED) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
6	EA	12 in., one-way, three section (R,Y,G) (LED) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
4	EA	Video Detection Camera and cable (1- 400 LF, 2- 200 LF, 1 - 300 LF)
1	LF	Video detector retro -fit w/power.
1	EA	Video detector interface panel
300	EA	CCTV Cable.
4	EA	30 in. x 36 in. R-3-5(L) sign with mast arm mounting hardware.
2	EA	16 in. x Var D-3(1) dual faced sign with mast arm mounting hardware.
1	EA	24 in. x 51 in. shield assembly with pole , mounting hardware.
1	EA	30 in. x 51 in. shield assembly sign with pole mounting hardware.
1	EA	36 in. x 75 in. shield assembly sign with pole mounting hardware.
1	EA	48 in. x 75 in. shield assembly sign with pole mounting hardware.
1	EA	30 in. x 42 in. W9-2(4)(R) sign with mast arm mounting hardware.
2	EA	21 in. x 15 in. M6-2R sign for attachment to existing shield assembly panel
1	EA	30 in. x 24 in M5-1 sign for attachment to existing shield assembly Panel.
8	EA	Non-Invasive Micro -loop probe (set of 3) with 1000 ft. lead-in cable.
2	EA	20 ft. luminaire arm.
2	EA	250 W H.P.S. lamp and luminarie.

Quantity	Units	Description
Lump Sum	LS	Mobilization.
Lump Sum	LS	Maintenance of traffic.
2	CY	Test pit excavation.
14	EA	Handhole.
875	LF	2-conductor electrical tray cable (No. 12 A.W.G.).
625	LF	5-conductor electrical cable (No. 14 A.W.G.).
690	LF	7- conductor electrical cable (No. 14 A.W.G.).
390	LF	Bare copper stranded ground wire (No. 6 A.W.G.).
670	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
200	LF	3 in. polyvinyl chloride [Schedule 80] electrical conduit - slotted in roadway.
250	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
350	LF	4 in. polyvinyl chloride [Schedule 80] electrical conduit - Slotted in roadway
100	LF	1-1/4 in. duct.
10.0	CY	Concrete foundation for traffic signal equipment.
2	EA	Ground rod -¾in. diameter x 10 ft. length.
185	LF	24 in. wide Heat Applied Permanent Preformed Thermoplastic Pavement Marking - white for stop line.
2	EA	Remove and dispose of existing concrete foundation 12 inches below grade.
Lump Sum	LS	Remove and dispose of existing signal equipment.
Lump Sum	LS	Relocate existing CCTV camera.

Phase Chart

	1,2	3,4	5,6,7	8,9	10	11	12	13	14	15
Phase 2 & 5	←R—	R	←G—	G	R	R	R	R	R	R
5 Change	←R—	R	←Y—	G	R	R	R	R	R	R
Phase 2 & 6	←R—	G	←R—	G	R	R	R	R	R	R
2 Change	←R—	G	←R—	Y	R	R	R	R	R	R
Phase 1 & 6	←G—	G	←R—	R	R	R	R	R	R	R
1 & 6 Change	←Y—	Y	←R—	R	R	R	R	R	R	R
Phase 3 & 7	←R—	R	←R—	R	R ←G—	R ←G—	R	R ←G—	R ←G—	R
3 & 7 Change to Phase 3 & 8 or Phase 4 & 7 or Phase 4 & 8										
Phase 3 & 8	←R—	R	←R—	R	G ←G—	G ←G—	G	R	R	R
3 Change	←R—	R	←R—	R	G ←Y—	G ←Y—	G	R	R	R
Phase 4 & 7	←R—	R	←R—	R	R	R	R	G ←G—	G ←G—	G
7 Change	←R—	R	←R—	R	R	R	R	G ←Y—	G ←Y—	G
Phase 4 & 8	←R—	R	←R—	R	G	G	G	G	G	G
4 & 8 Change	←R—	R	←R—	R	Y	Y	Y	Y	Y	Y
Flashing Operation	FL/ ←R—	FL/Y	FL/ ←R—	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

Wiring Diagram



A B C D — Video Detector Cable

E — CCTV Camera Cable

F G H J K L M N — Non-Invasive Micro-loop Detector Lead-in Cable

O P — 2-Conductor Tray Cable (No. 12 A.W.G.)

Q R S T — 5-Conductor Electrical Cable (No. 14 A.W.G.)

U V — 7-Conductor Electrical Cable (No. 14 A.W.G.)

W — Bare Copper Ground Wire (No. 6 A.W.G.)

* — Existing Cable

EF — Existing Underground Electrical Service By BGE

⋇ — Proposed Grounding Rod

ML — Micro-loop Detector (Non-Invasive)

EP — Existing Phone Service By Verizion

NOTE

These plans are approved for construction for a period of one (1) year from the date of approval. Should construction not begin within this time frame these plans shall be null and void without a re-review from the Traffic Engineering design Division.

The Traffic Group

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SHA
STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

US 1 (Blair Rd) at MD 152 (Mountain Rd)

GENERAL INFORMATION SHEET

SCALE N/A DATE May 9, 2008 CONTRACT NO. BW996M82

DESIGNED BY Frank Hoeckel COUNTY Harford
DRAWN BY Frank Hoeckel LOG MILE 12000101.35
CHECKED BY ______ T.I.M.S. NO. H-240
F.A.P. NO. N/A TOD NO. ______

DRAWING NO. TS CI 681-J SHEET NO. 2 OF 2

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DRILL HOLES

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